PATENT NO.

: 7,041,871 B1

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APPLICATION NO.: 09/724965

DATED

: May 9, 2006

INVENTOR(S)

: Nils Lonberg et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Application:

Page 2, Column 2 (Other Publications), Line 13, Delete "responce" and insert -- response --.

Page 3, Column 1 (Other Publications), Line 33, Delete "Cynomologus" and insert -- Cynomolgus --.

Page 3, Column 1 (Other Publications), Line 39, after "\u03c4" delete "ig" and insert -- Ig --.

Page 3, Column 2 (Other Publications), Line 33, Delete "prior" and insert -- prior --.

Page 3, Column 2 (Other Publications), Line 47, Delete "resonses" and insert -- responses --.

Page 4, Column 2 (Other Publications), Line 40, Delete "811-820." and insert -- 811-820 (1993). **--**.

Column 6, Line 63, Delete "heavy" and insert -- light --.

Column 10, Line 3, Delete "V<sub>r</sub>J" and insert -- VDJ --.

Column 11, Line 13, Delete " $\gamma 1^{-+}/\mu^{-}$ " and insert --  $\gamma 1^{-}/\mu^{+}$ . --.

Column 11, Line 45, Delete "Bath" and insert -- Both --.

Column 11, Line 51, After "top" delete ";" and insert -- (SEQ ID NO: 333); --.

Column 12, Line 44, "VH51 µ1" and insert -- VH51p1 --.

Column 12, Line 51, Delete "JC+/-;" and insert -- JC $\kappa$ +/-; --.

Column 13, Line 13, Delete "K-light" and insert --  $\kappa$ -light --.

Column 13, Line 20, Delete "(O)" and insert -- ( $\Delta$ ) --.

Column 13, Line 29, Delete "1.5/ml" and insert -- 1.5µ/ml --.

Column 14, Line 12, Delete "19M+gates" and insert -- IgM+gates --.

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 14, Line 13, Delete "IgG" and insert -- IgGκ --.

Column 14, Line 41 (Approx.) After "parantheses." insert -- Fig. 97 shows human IgM and IgG anti-IL8 serum titers in transgenic mice. Responses of the individual mice to the immunogen were assessed by ELISA, converted to titers (1 = OD > 0.1 at 1:50)dilution of serum; 2 = OD > 0.1 at 1:250 dilution of serum; 3 = OD > 0.1 at 1:1250 dilution of serum; 4 = OD > 0.1 at 1:6250 dilution of serum; and 5 = OD > 0.1 at 1:31250 dilution of serum) and then averaged.

Fig. 98 shows the effect of human anti-IL8 mAb on IL8-induced neutrophil chemotaxis and elastase release. -- as new paragraph.

Column 14, Line 56, After "of" delete "the".

Column 14, Line 67, Delete "transgeic" and insert -- transgenic --.

Column 14, Line 67, Delete "segment" and insert -- segment --

Column 15, Line 1, Delete "occurance" and insert -- occurence --.

Column 16, Line 55, Delete "adsoption" and insert -- adsorption --.

Column 17, Line 7, Delete "perferrably" and insert -- preferably --.

Column 25, Line 31 (Approx.) After "reference" delete "." and insert -- ). --.

Column 25, Line 38 (Approx.) Delete "hypermutatian," and insert -- hypermutation --.

Column 47, Line 57, "JK" and insert -- Jκ --.

Column 47, Line 57, "CK" and insert -- Cκ --.

Column 49, Line 4, " $107 \text{ M}^{-1}$ ," and insert --  $10^7 \text{ M}^{-1}$ , --.

Column 49, Line 5, Delete "108 M<sup>-1</sup>" and insert -- 10<sup>8</sup> M<sup>-1</sup> --.

Column 56, Line 28, Delete "aty" and insert -- at --.

Column 57, Line 36, Delete "CHO" and insert -- CHO --.

Column 58, Line 42, Delete "Homeff," and insert -- Horneff, --.

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: May 9, 2006

DATED : INVENTOR(S) :

: Nils Lonberg et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 59, Line 13, Delete "determing" and insert -- determining --.

Column 60, Line 39, Delete "1348-1351" and insert -- 1348-1351 --.

Column 67, Line 58 (Approx.) Delete " $\gamma$ " and insert --  $\lambda$  --.

Column 68, Line 5, Delete " $\gamma$ " and insert --  $\lambda$  --.

Column 73, Line 16, Delete "Of" and insert -- of --.

Column 75, Line 34, Delete "Jk" and insert -- Jκ --.

Column 75, Line 34, Delete "C" and insert -- Cκ, --.

Column 78, Line 17, Delete "poll," and insert -- poll. --.

Column 78, Line 18, Delete "JH" and insert -- HH, --.

Column 79, Line 65 (Approx.) Delete "aat" insert -- att --.

Column 87, Line 48, Delete "associated" and insert --  $\delta$ -associated ---

Column 88, Line 20, Delete " $DM_2$ " and insert --  $D_{M_2}$  --.

Column 88, Line 20, Delete "(Zchihara" and insert -- (Ichihara --.

Column 88, Line 23, Delete " $D_{xP}$ " and insert --  $D_{xn'1}$ , --.

Column 89, Line 59 (Approx.) Delete "A29.5" and insert --  $\lambda$  29.5 --.

Column 90, Line 44, Delete "pHC<sub>2</sub>-" and insert -- pHC<sub>2</sub> --.

Column 91, Line 41, Delete "Kienow" and insert -- Klenow --.

Column 94, Line 61 (Approx.) Delete "0-150" and insert -- o-150 --.

Column 103, Line 29 (Approx.) Delete " $J_{\kappa}1$ " and insert -- J $\kappa 1$  --.

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APPLICATION NO.: 09/724965

DATED

: May 9, 2006

INVENTOR(S)

: Nils Lonberg et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 111, Line 6-7, Delete "C. An IgKappa antisense transgene construct." and insert the same as sub-heading.

Column 111, Line 12 (Approx.) Delete "gtc" and insert -- gta --.

Column 111, Line 20, Delete "pBCEI" and insert -- pBCE1 --.

Column 111, Line 21, Delete "pKASI," and insert -- pKAS1. --.

Column 111, Line 22, Delete "pKASI," and insert -- pKAS1. --.

Column 114, Line 27, After "ctc" delete 'aca" and insert -- acc --.

Column 114, Line 29, Delete "λMBL3/SP6/T7" and insert -- λEMBL3/SP6/T7 ---

Column 114, Line 57 (Approx.) Delete "(SEQ ID NO: 84)" and insert -- (SEQ ID NO: 184) --.

Column 117, Line 54 (Approx.) Delete "ar" and insert -- as --.

Column 118, Line 4 (Approx.) Delete "Sceening" and insert -- Screening --.

Column 118, Line 37 (Approx.) Delete "3" and insert -- 3' --.

Column 119, Line 11 (Approx.) Delete "Jk1" and insert -- Jk1 --.

Column 119, Line 21, Delete "pKCi" and insert -- pKCI --.

Column 119, Line 39 (Approx.) Delete "KCIe-1399," and insert -- KCle-1399, --.

Column 119, Line 58, Delete "integrations" and insert -- integrations --.

Column 120, Line 5, Delete "K" and insert -- κ --.

Column 120, Line 8, Delete "insolublized" and insert -- insolubilized --.

Column 120, Line 65, Delete "JHD++/JKD+++" and insert -- JDH++/JKD++ --.

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APPLICATION NO.: 09/724965

DATED

: May 9, 2006

INVENTOR(S)

: Nils Lonberg et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 121, Line 53 (Approx.) Delete "Souther" and insert -- Southern --.

Column 121, Line 60, Delete "hman" and insert -- human --.

Column 122, Line 54, Delete "intergration" and insert -- integration --.

Column 122, Line 58, Delete "intergration" and insert -- integration --.

Column 123, Line 7, Delete "s)" and insert -- (s) --.

Column 123, Line 10, Delete "respone" and insert -- response --.

Column 124, Line 18, Delete "Jy1Cy1)." and insert -- Jλ1Cλ1). --.

Column 125, Line 49, Delete "constan" and insert -- constant --.

Column 125, Line 49, Delete "and" before "JH".

Column 125, Line 49, Delete "gene(s);" and insert -- gene(s)); --.

Column 129, Line 53 (Approx.) Delete "gta" and insert -- gra --.

Column 130, Line 43 (Approx.) Delete "[" and insert --  $\mu$  --.

Column 130, Line 48 (Approx.) After "PCR" delete "." and insert a space between "PCR" and "fragments".

Column 131, Line 35, Delete "Factor" and insert -- Vector --.

Column 132, Line 6, Delete "p" and insert --  $\mu$  --.

Column 134, Line 21, Delete "4x17 µl" and insert -- 4x17E1 --.

Column 135, Line 58 (Approx.) Delete "mm," and insert -- nm, --.

Column 136, Line 27, Delete "y1" and insert -- γ1 --.

Column 136, Line 61, Delete "+,  $\gamma$ 1+" and insert --  $\mu$ <sup>+</sup>,  $\gamma$ 1 --.

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PATENT NO. : 7,041,871 B1 APPLICATION NO.: 09/724965

: May 9, 2006 DATED INVENTOR(S)

: Nils Lonberg et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 137, Line 2, Delete "IgD+," and insert -- IgD<sup>+</sup>, --.

Column 137, Line 3, Delete "'IgM-phenotype" and insert -- IgM-phenotype --.

Column 139, Line 30 (Approx.) Delete "JND $^+/+J_KD^-$ ," and insert -- JHD $^+/+J_KD^-$ , --.

Column 139, Line 57 (Approx.) Delete "V," and insert -- V<sub>1</sub> --.

Column 140, Line 4, Delete "C2," and insert -- HC2, --.

Column 140, Line 44, Delete "CK" and insert -- Cκ --.

Column 141, Line 8, Delete "255A" and insert -- 2550 ---

Column 141, Line 9, Delete "y" and insert --  $\gamma$  --.

Column 141, Line 10, After "described" delete "[references]".

Column 142, Line 4, Delete "a" and insert --  $\alpha$  --.

Column 142, Line 56, Delete "K" and insert --  $\kappa$  --.

Column 145, Line 16, Delete "IgM" and insert -- IgMκ --.

Column 146, Line 62 (Approx.) Below "sequence is:" delete "The heavy chain VDJ junction sequence is:".

Column 147, Line 6 (Approx.) Delete "vk65.15" and insert -- Vk65.15 --.

Column 147, Line 31, Delete "30.3" and insert -- 30.0 --.

Column 148, Line 26, Delete "plasmid" before "β-lactamase".

Column 151, Line 10, "cagcaa" and insert -- cag caa --.

Column 152, Line 21, After "function." Delete "HCo7." and insert the same as a sub-heading.

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APPLICATION NO.: 09/724965

DATED

: May 9, 2006

INVENTOR(S)

: Nils Lonberg et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 153, Line 2, After "two" delete "endogenous locus disruptions and hemizygous for the two".

Column 154, Line 39 (Approx.) Delete " $\alpha$ -3" and insert -- cc-3" ---

Column 154, Line 40 (Approx.) Delete " $\alpha$ -3" and insert -- cc-3" ---

Column 154, Line 41 (Approx.) Delete "α-3')" and insert -- cc-3') --.

Column 154, Line 42 (Approx.) Delete "\alpha-3")" and insert -- cc-3") --.

Column 154, Line 46 (Approx.) Delete "α-3')" and insert -- cc-3') --.

Column 155, Line 11, "Vk" and insert -- Vk --.

Column 156, Line 18, Delete "southern blot" and insert -- Southern Blot --.

Column 156, Line 25, Delete "λAC" and insert -- YAC --.

Column 156, Line 35 (Approx.) Delete "K" and insert --  $\kappa$  --.

Column 156, Line 37, Delete "k" and insert --  $\kappa$  --.

Column 156, Line 38, Delete "k" and insert --  $\kappa$  --.

Column 156, Line 52 (Approx.) Delete "pCR11" and insert -- pCRII --.

Column 157, Line 23, Delete "B220+cell" and insert -- B220+cell ---

Column 159, Line 13, Delete "2 mg/mil," and insert -- 2 mg/ml, --.

Column 163, Line 8 (Approx.) Delete "105" and insert -- 104 --.

Column 163, Line 9 (Approx.) Delete "1.1 ( $\pm$ 1.5) × 10<sup>4</sup>" and insert  $-1.1 (\pm 0.41) \times 10^5 -$ 

Column 163, Line 11 (Approx.) Delete "105" and insert -- 505 --.

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APPLICATION NO.: 09/724965
DATED: May 9, 2006
INVENTOR(S): Nils Lonberg et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 164, Line 32 (Approx.) Delete "10CS," and insert -- 10C5, --.

Column 164, Line 35, Delete "JHD/JCKD/HC2/KCoS" and insert -- JHD/JCKD/HC2/KCo5 --.

Column1 167, Line 38 (Approx.) Delete "Secrment" and insert -- segment --.

Column1 167, Line 39 (Approx.) Delete "CDR" and inset -- CDR3 --.

Column 1167, Line 40 (Approx.) Delete "VkA27/A11" and insert -- VkA27/A1 --.

Column 169, Line 12, After "following" delete "2".

Column 169, Line 20 (Approx.) Delete "NO:242)," and insert -- NO:232), --.

Column 170, Line 3, Delete "0-529" and insert -- o-529 --.

Column 170, Line 20 (Approx.) Delete "by" and insert -- bp --.

Column 171, Line 38, Delete "pCG7-96 (SEQ ID" and insert -- pCK7-96 (SEQ ID NO:218) --.

Column 189, Line 46, Delete "IL-BRB" and insert -- IL-8RB --.

Column 189, Line 50, Delete "my/mil" and insert -- my/ml --.

Column 189, Line 56, Delete "125I]-" and insert -- 125I- --.

Column 190, Line 12, Delete "Ca++concentrations" and insert -- Ca<sup>++</sup>concentrations ---

Column 190, Line 24, Delete "Ca++flux." and insert -- Ca<sup>++</sup> flux. --.

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DATED : May 9, 2006
INVENTOR(S) : Nils Lonberg et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 407, Line 41 (Approx.) In Claim 5, Delete, "V $\kappa$ segments" and insert -- V $\kappa$  segments --.

Column 408, Line 26, In Claim 9, Delete "claim 6," and insert -- claim 5, --.

Column 408, Line 53, In Claim 14, Delete "claim 6" and insert -- claim 5, --.

Signed and Sealed this

Nineteenth Day of August, 2008

JON W. DUDAS
Director of the United States Patent and Trademark Office